

# Pittsburgh Section of the American Chemical Society Volume CIX, No. 10 May 2023

## **Contents**

Get to Know a Member: Ronghong Lin, Chair of Environmental Group		
Join us in Indiana, PA for the ACS Monthly Meeting	2	
Call for Nominations: Pittsburgh and Distinguished Service Award	3	
ACS Spring 2023: Councilors' Report	4-5	
May ACS/SSP/SACP Awards Dinner	6	
Pittsburgh Regional Science and Engineering Fair: ACS Winner	7-8	
Travel Grant Recipients report on ACS Spring 2023 Meeting	9-14	
Survey: Environmental Group Lectures	15	
Meeting Registration and Travel Grant Application	16-18	
Business Page	19	





## Get to Know A Member – Ronghong Lin, Ph.D.



#### 1. What is your work and ACS (if applicable) title?

ACS: Director, Chair of the Environmental Group Work: Senior R&D Chemist, Calgon Carbon Corporation

#### 2. How many years have you been in the ACS?

17 years

#### 3. What is the biggest benefit of ACS Membership?

The biggest benefit of ACS membership is the opportunity of meeting great people and serving the local chemistry community.

#### 4. What did you want to be when you were a child?

A scientist

#### 5. What made you fall in love with Chemistry?

Among all the courses I took in high school, chemistry was the one that I found easy to study and did the best.

#### 6. What is your favorite part of your career or job?

The favorite part of my current job is being able to provide support and assistance to internal and external customers to address critical technical issues.

#### 7. Which chemist, past or present, would you like to meet and why?

Irving Langmuir. I would be curious to hear about how he came up with his adsorption theory.

Do you want to be our featured member? Please email hljuzwa@shimadzu.com to get onto the schedule!



# MEETING

In-Person or on Zoom

MAY 16, 2023

Levity Brewing Company 1380 Wayne Ave #A Indiana, PA 15701 Free parking and cash bar!



## "Aroma Compounds in Beer: Is it Supposed to Smell like That?"

Professor Nathan McElroy Indiana University of Pennsylvania

5:30 PM Appetizers (provided)

6:00 PM Seminar

6:20 PM ACS Meeting

RSVP at https://forms.gle/JewzYS4pD5BeEbCY7

ZOOM MEETING ID: 965 7988 3690

ZOOM MEETING LINK: HTTPS://PITT.ZOOM.US/J/96579883690



## **Call for Nominations**

## **Pittsburgh Award**

The Pittsburgh Award was established in 1932 by the Pittsburgh Section of ACS to recognize outstanding leadership in chemical affairs in the local and larger professional community. This Award symbolizes the honor and appreciation accorded to those who have rendered distinguished service to the field of chemistry. The Award consists of a plaque presented annually at a section dinner. Members of the Pittsburgh Section, or in exceptional cases, nonmembers, who have done work worthy of recognition toward increasing chemical knowledge, promoting the chemical industry, benefiting humanity, or advancing the Pittsburgh Section, are eligible for consideration.

## **Distinguished Service Award**

The Distinguished Service Award was established in 2007 by the Pittsburgh Section of the ACS to expand and replace the predecessor Chairman's Award of the section. Both recognize outstanding volunteer service to the Section. The Award, consisting of a plaque, is presented annually at a Section dinner, which is open to the public. Members of the Pittsburgh Section, past or present, who have provided outstanding service in advancing the Pittsburgh Section, are eligible for consideration.

Nominations for both awards are solicited from the membership of the Pittsburgh Section. Nomination packets and more information about the awards, including information on past winners, can be found on the Pittsburgh ACS website: <a href="https://pittsburghacs.org/awards/">https://pittsburghacs.org/awards/</a>

Please send all nominations (or questions about nomination process) to Pittsburgh Section Chair-Elect, Alysia Mandato, <a href="mailto:atm75@pitt.edu">atm75@pitt.edu</a>. Nominations are due no later than **Tuesday**, **August 15**, **2023**.

## Report on: ACS SPRING 2023 NATIONAL MEETING – Indianapolis, Indiana (Hybrid)

Four of ACS Pittsburgh Section Councilors participated in the Hybrid Council Meeting (Indianapolis)

The meeting attracted approximately 12,623 registrations (1831 hybrid and 10,792 inperson).

The Committee on Nominations and Elections announced that Council selected Dorothy J. Philips and Florian J. Schattenmann as candidates for 2024 President-Elect. These two Candidates, along with candidates selected via petitions will stand for election in the Fall 2023 National Elections.

The Committee on Nominations and Elections announced the results of the election held prior to the Hybrid Council Meeting. By internet ballot, the Councilors selected from District III were Diane Krone and Helen(Bonnie) A. Lawlor. Ballots will be distributed to members of District III around October 1, 2023 for election of Director for the District.

The Committee on Nominations and Elections announced the selection of the following candidates for Director-at-Large for the 2024-2026 term: Wayne E. Jones, Jr., Daniel Rabinovich, Carolyn Ribes, and Joseph P. Stoner. The election of two Directors-at-Large from among these four candidates and any selected via petition will conducted in the fall. Ballots will be distributed to the Council around October 1, 2023.

By electronic ballot, the Council elected Daniel Rabinovich for a two-year term(2023-2024) on the Committee on Committees (ConC).

As required by the ACS Governing Documents, CPC has set the divisor for Local Section and Division representation at Council for the period 2024-2027. The formula is based on membership numbers as of December 31,2022. Notification will be sent by the Secretary to all affected units by May 1, 2023, with details on how they will be impacted.

On the recommendation of the Council Policy Committee (CPC), Council approved the Petition to Amend the Duties of the Council Policy Committee to authorize CPC to review the conduct of Councilors.

On the recommendation of the Committee on Committees(ConC), and with the concurrence of the Council Policy Committee, Council approved the Petition to amend the Duties of the Committee on Environmental Improvement to change the name of the Committee to the Committee on Environment and Sustainability.

ConC announced that the opening of the online preference form to all ACS members begins on April 3, 2023 and will run through July 3. Councilors interested in serving on an ACS Committee in 2024 should go to CMTE.acs.org to complete their preferences.

The Committee on Local Section Activities (LSAC) announced the launch of the ACS Speaker Directory, a new resource for our component group leaders to access a wide range of speakers for their in-person, hybrid, and asynchronous events.

President Giordan introduced and led a special discussion on the ongoing review of Society Committees. She sought Councilor input of positive ideas, key issues, and opportunities to improve the structure of committees.

Four specific prompts were posed to Councilors for their input and suggestions:

- 1. Ideally, for ACS to have a committee structure that is forward thinking and able to address opportunities for members, ACS and the chemistry enterprise, we would...
- 2. Current and future key issues impacting ACS, the chemistry enterprise and our committees include...
- 3. I wonder what the positive impact on committees, member involvement, and ACS would be if we were to...
- 4. I wish that committees at ACS could...

Councilors provided their ideas and thoughts, and relevant Society units will receive this input within the next several weeks.

The Council passed several resolutions:

- 1. In memory of deceased Presidents Brian M. Rushton and Dr. S. Allen Heininger
- 2. In memory of deceased Councilors Yorke E. Rhodes and Maurice M. Bursey.
- 3. In sincere appreciation of the Indiana Local Section, host Section for the spring 2023 ACS meeting.

The Board Working Group on Structure and Representation provided an update on their efforts to add an International District Director to the Board of Directors in the form of the Petition to Add International Representation on the Board of Directors, which was considered by the Council at the spring meeting.

Pittsburgh Section Councilors Respectfully submitted, Richard S. Danchik (Author) Kim Woznack Haitao Liu Kristin Nuzzio



## Annual May Awards Dinner with ACS, SSP, and SACP

Celebrate the yearly award winners of the ACS, SSP, and SACP at Duquesne University.

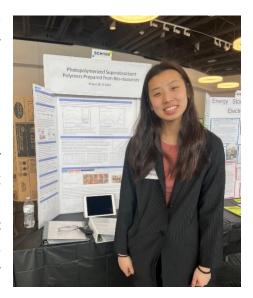
Wednesday, May 24

The cost is \$15 per person. Please RSVP by May 17.

## **ACS Pittsburgh 2023 PRSEF Winner**

The 84th Annual Pittsburgh Regional Science & Engineering Fair (PRSEF) was held on March 28-29, 2023, in the Carnegie Science Center. The event attracted more than 450 students in grades 6–12 from the 21 counties within Western Pennsylvania and Garrett County, Maryland, this year. The PRSEF has been a Pittsburgh tradition since 1940 and invites middle and high school students to take on the challenge of designing, implementing, and communicating an original experiment while competing for cash prizes and scholarships.

The ACS Pittsburgh Local Section sponsors one grand cash prize in the Senior division. The winner is determined by a team of up to three judges from the Local Section based on the quality of research and presentation, including the novelty of the research, understanding of the research background, research method and results, poster preparation, and oral presentation. The recipient of this year's award is **Grace Wang** from Franklin Regional Senior High School. Her research topic was Photopolymerized Superabsorbent Polymers Prepared from Bio-resources. An abstract of her work and a short bio are attached below.



Biography: Grace is a current senior at Franklin Regional Senior High School in Murrysville Pennsylvania. She has participated in the Pittsburgh Regional Science and Engineering Fair since 2018. Grace has always been drawn to the puzzle-solving thrill of scientific research and hopes to continue conducting research throughout her future educational endeavors. Outside of science fairs, she plays violin in the Pittsburgh Youth Symphony Orchestra, is a member of her high school swim team, and is involved in student government. She plans to attend college to study chemistry.

Abstract: Previous reports illustrate the feasibility of preparing superabsorbent polymers through a slow-pace and high-energy thermal polymerization process that utilizes petroleum-based monomers. Bio-monomers, such as Itaconic acid (IA),

have been emerging due to their sustainability in response to recent climate change and environmental issues. This project explores the feasibility of superabsorbent polymer preparation through the superfast photopolymerization of bio-monomers such as IA. To maximize IA content in the final product, the solubility of solid IA in liquid dimethylacrylamide was examined. It was found that a clear monomer solution could be formed with an IA concentration as high as 33% by weight. Hydrophilic monomers N, N-dimethylacrylamide and 2-hydroxyethyl methacrylate, and bio-monomer IA were photopolymerized under ambient conditions utilizing phenylbis(2,4,6-trimethylbenzoyl)phosphine oxide as a photoinitiator in approximately one minute. Solid polymer beads have been prepared from different ratios of monomers, and their water absorbance was evaluated to confirm successful polymerization. The photopolymerization process and final polymers were characterized with Fourier-Transform Infrared Spectroscopy (FTIR), and Gas chromatography to further confirm successful polymerization. Polymer beads prepared with the super-fast photopolymerization technology in this study can absorb up to 356 times water of their dry weight. Moreover, the superabsorbent beads absorb much more water at high temperatures.

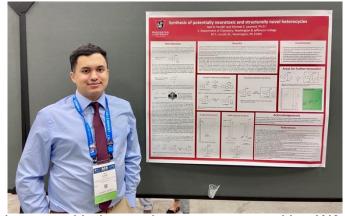
#### **ACS Travel Grant Recipient: Neil Pandit**

I had the pleasure of attending the ACS National Meeting this March in Indianapolis. I was selected to present a poster I prepared based on independent research I had conducted with the guidance of Michael S. Leonard, PhD, Professor of Chemistry. As a senior at Washington & Jefferson College, I had been performing this research over this past academic year and had the opportunity to present my work at the national meeting. I have never attended a national meeting for any organization and am grateful for the support of W&J and the ACS Pittsburgh Local Section to make my poster presentation come to fruition.

I was joined by Callie Barber '23, who is the President of W&J's SAACS chapter. She was presenting a poster on chapter success and received an award for her role in improving our SAACS chapter's involvement on campus.

There were a multitude of sections to attend, but I was very enthused by the opportunity to attend Prof. Dave McMillan's talk on his Nobel Prize winning work. I was pleasantly surprised with how much of his talk I was able to understand. I was told that these types of lectures can sometimes be very technical and somewhat dry. Prof. McMillan was very informative but also funny, demonstrating the importance of science communication since not all of us are the most familiar with organocatalysts.

My poster session presentation went successfully. I was able to talk with faculty members at other institutions who were studying the type of compound that I did work on (heterocycles). I also met a few alumni of W&J who have either received or are in the process of attaining advanced degrees in the field, and it was really interesting to



hear about their experiences. One of them was kind enough to connect me with a W&J alumnus who is attending the institution that I will be heading to after graduating from W&J. I also enjoyed talking with my poster neighbors (Emmanuel College in Boston, MA and the US Naval Academy in Annapolis, MD) and hearing about their work.

In the free time that Callie and I had, it was really nice to walk around Indianapolis and see the monument in the center of downtown. It was also a fun surprise when walking back from a late lunch, we were able to "bump" into members of the Dallas Mavericks who were leaving their hotel to play against the Indiana Pacers that evening. I got some really great photos of NBA stars Kyrie Irving and Luka Doncic.

Overall, this was quite the experience. I thoroughly enjoyed presenting my work, learning more about the work of fellow undergraduate students and about the many roles we all can play in the transforming power of chemistry.

## **ACS Travel Grant Recipient: Trevor Kotchman**

Thanks to the Pittsburgh Section ACS Travel Grant I was able to attend the ACS Spring 2023 conference in Indianapolis, Indiana. I was grateful to have this opportunity to present my research at my first ever ACS conference. As a senior preparing to attend graduate school, I found this experience invaluable. By mistake, I had registered to present in the professional poster session instead of the undergraduate poster session. While I initially dreaded this, I realized that this was the perfect opportunity to get the experience I was looking for at this conference. My poster presentation allowed me to discuss my research with others and presenting in the professional session specifically meant that I could get ideas from peers working in similar research. What I appreciated



most was the mentorship I was able to give to other undergraduate students. I remember two undergraduate students who had stopped by my poster because they were looking for ideas, one to begin a research project of her own, the other seeking advice for his current research. While I had only had one or two more years of research experience than them, I believe that being able to listen to their questions and answer to the best of my ability is how the conference most prepared me for graduate school. Since I will be working in a lab and expected to TA in graduate school, I believe I have gained

invaluable experience discussing research and assisting undergraduate students. While at the conference, I tried to make the most of my time by attending various symposiums related to my fields of interest in biochemistry and organic chemistry. I was also glad I was able to attend the undergraduate poster session, where I was able to see my friends from the lab discuss the research we have been working on together. The most fun I had while at the conference was during the C&EN 100 Year Celebration. The "Jeopardy" game was engaging and entertaining. Despite the technical difficulties, you could feel that everyone in the room was having a good time. I am beyond grateful to the ACS Pittsburgh Section for awarding me the travel scholarship so I could attend the conference and gain this invaluable experience. ACS Spring 2023 is a conference I will never forget.

### **ACS Travel Grant Recipient: Isabelle Cunningham**

On March 25-27, 2023, I was able to travel to the ACS conference in Indianapolis, IN. I was very grateful for the opportunity as it allowed me to meet new people, gain new ideas for our student organization and outreach program, and explore a new city.



Figure 1. Myself posing with the Proud Chemist sign at the Convention Center.

On March 26, I accepted the Outstanding Student Chapter Award at the Student Awards ceremony since I was the president of my university's Chemistry club the previous year. While I was nervous to be the sole representative of my Chemistry club, I was proud to be up there accepting an award that my club and I worked so hard to earn; the nerves were eased when I saw the photos of our club on the PowerPoint. After the ceremony, my peers and I attended the student social where we got to meet students from other Chemistry clubs and dance and play games with them.



Figure 2. My peers, advisor (second right), and I (far right) at the Student Award Ceremony.

On March 27, I presented my research on gold nanoparticles, and I presented a poster about the Chemistry club at Saint Francis University, while my peers also presented their research and a poster about our outreach program. While presenting, I was able to learn what topics were being researched and what breakthroughs are being made at other universities. I was also able to see the types of events and activities other

Chemistry clubs are doing, which gave me ideas for new events our club could host. In fact, while at a poster session, my peer heard about a virtual conference for women in STEM that was going to be hosted on April 23, 2023, and we decided that we were going to stream that conference at our university so that our students had the opportunity to listen to the presenters. I was also able to attend research talks from various presenters and learn about research into water treatment and bonding interactions.



Figure 3. My peers, advisor, and I posing with the ACS mole mascot. When my peers and I were not at the Convention Center, we were exploring the city of Indianapolis. We had the opportunity to visit the Indianapolis Motor Speedway, the INDY sign, and various local attractions/restaurants. This was an interesting experience because up until this point, I had not explored many cities. This was also the furthest I had ever traveled away from rural Pennsylvania.

In the end, I am very grateful for this experience. This is going to be my only time attending a Chemistry conference in my undergraduate career, so I am glad that I had the opportunity to go with some of my close friends.

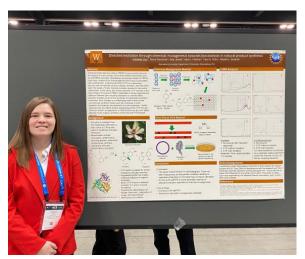
### **ACS Travel Grant Recipient: Schaelee Guy**

Thank you, for supporting the amazing opportunity I had to travel to the American Chemical Society conference in Indianapolis this past March. I had a wonderful time not only presenting my research, but also learning about all things chemistry by attending workshops and listening to other research presentations.

During the time in which I presented my poster, I had many people of all ages stop by to listen to me present my research and ask questions. One person in particular also did research with the cytochrome p450 enzyme, similar to mine, and was able to offer his input on different methods to mutate the plasmid containing the enzyme. This information provided me with another direction to take the research in the future. I also enjoyed explaining my research to other college students who were not too familiar with natural products, enzymatic reactions and directed evolution because I felt as if I was teaching them something new. Not only was I able to present my research, I was also able to listen to research done by other students. One that I found interesting was a project on organic synthesis of molecules known to have promising effects against Naegleria fowleri.



I also enjoyed listening to speakers such as Nobel laureate Carolyn Bertozzi and Dr. Polly Arnold discuss their research and pursuing a career in STEM. Dr. Carolyn Bertozzi talked about her research involving bioorthogonal chemistry and Dr. Polly Arnold



discussed her research regarding the F block on the periodic table. I will remember these speakers and what they discussed for many years to come.

Once again, I would like to thank you for this wonderful opportunity and learning experience. I am extremely grateful for being able to attend my first research conference and being able to share my research with those who are interested in chemistry and science as much as I am.

### **ACS Travel Grant Recipient: Madison McMonagle**

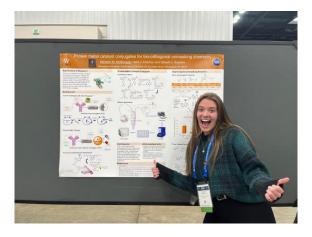
I am beyond grateful for the opportunity of attending the 2023 Spring ACS Conference in Indianapolis, Indiana. This would not have been possible without the support of the ACS Pittsburgh travel grant! This was a new experience attending a scientific conference and I will never forget the things I learned and experienced while I was there.



Presenting at the conference was something I had never done before, let alone presenting my research project at all. When presenting, I met other students who are also doing anticancer therapy research, but I did not get the opportunity to find others researching a very similar topic. This gave me the chance to inform others about the antibody metal catalyst conjugate therapy I am researching and how this could potentially improve upon the antibody drug conjugate therapy platform. This was particularly exciting for me because I was nervous at first, but quickly saw how exciting it was to explain to other scientists about the research I have been working hours on. This produced an incredible

amount of motivation for me in my education and when I returned, I immediately signed up to present my research at our university's research symposium.

This conference has opened doors for me by meeting fellow research students, professors at other universities, and even the 2022 Chemistry Nobel Laureate, Dr. Carolyn Bertozzi. Since learning about Dr. Bertozzi's story and her current research, I have become further motivated to continue research and pursue a career in the field of medicinal chemistry.



While at the conference, I also attended the graduate school fair where I was able to speak with individuals from other universities. This was the first opportunity I have been able to explore options for graduate school aside from what I can find online. This enabled me to ask questions about what graduate school is like and how I can choose where to attend. I learned about research being conducted with PI's at other universities, which opened my eyes to what I could potentially work on while in graduate school.

## **ACS Pittsburgh Local Section Environmental Lecture Survey**

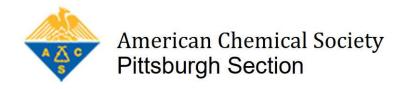
The Environmental Group of the ACS Pittsburgh Local Section has been organizing an environmental lecture series. We intend to continue monthly with a variety of speakers from academia, industry, and other research institutes as well and cover various chemistry and environmental science-related topics.

To better serve our community, we invite our members and non-members to complete this survey so that we can organize the lectures accordingly to best meet your interests and needs.

Please do not hesitate to contact us at dr.ronghong.lin@gmail.com, if you have any questions.

Thank you very much for your cooperation!

Link to survey: <a href="https://docs.google.com/forms/d/e/1FAIpQLSe-V4GWESgjeLIBZby3AxOX">https://docs.google.com/forms/d/e/1FAIpQLSe-V4GWESgjeLIBZby3AxOX</a> FSamfS2ZdRmpIpTIn4m QSI7A/viewf
<a href="https://docs.google.com/forms/d/e/1FAIpQLSe-V4GWESgjeLIBZby3AxOX">orm?usp=sf link</a>



Dear Academic ACS Pittsburgh Section Members,

The Pittsburgh Section of the American Chemical Society has budgeted funds to help encourage undergraduate/graduate student participation in national and regional ACS meetings. The awards are intended to help defray meeting registration and travel-related expenses (lodging, transportation, per diem) for eligible students. Awards will be made based on the scientific merit of the paper/poster to be presented, financial need, and preference will be given to ACS members.

To apply for the funds, applicants should complete the attached application and return it by the relevant deadline. The deadlines for receipt of applications are as follows:

- 06/01 (for travel to be completed by 12/31)
- 12/01 (for travel to be completed by 06/30)

As noted on the application, students should include an abstract and confirmation (if received) of the paper/poster being accepted for the Meeting. In addition to the application form, applicants should include a recommendation letter from the PI of the project being presented and/or a recommendation letter from another and a personal statement as to the anticipated benefits of meeting attendance.

Applications can be made electronically (*preferred*) by emailing the application to Heather Juzwa (<u>hljuzwa@shimadzu.com</u> or <u>heather sapko@hotmail.com</u>) or by mailing a hard-copy application (Pittsburgh Section ACS Travel Grants / Heather Juzwa / Center / 321 Winners Circle / Canonsburg, PA 15317).

Since 2013, the Pittsburgh Section of the ACS has awarded up to four \$500 grants each year to aid our undergraduate/graduate student members in presenting papers or posters at ACS Meetings. This is an ongoing program in our Section, and details will be updated on our website (www.pittsburghACS.org) as necessary.

Applicants will be notified via email that their application was received. All efforts will be made to announce awards within two weeks of the application deadline, and all applicants will be notified of the final committee decisions. Our Section is looking forward to helping increase the participation of local students in ACS conferences. If you have any questions, please do not hesitate to contact me.

Sincerely,

Heather Juzwa, ACS Pittsburgh Section Student Travel Grants, Chair Senior Field Sales Engineer, Shimadzu Scientific Instruments, Inc

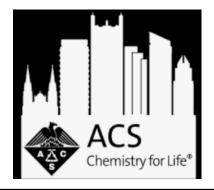


Application Deadline Travel Completion Date	
December 1	June 30 (subsequent year)
June 1	December 31 (same year)

ame of Applicant:
ame of Institution:
Undergraduate Student / Year
Graduate Student / Year
Mailing Address to Receive Payment if Awarded:
mail: Phone:
l:
CS Membership No.*:
If you do not know your ACS number, please email <u>hljuzwa@shimadzu.com</u> to receive it by email.
Neeting Location: Meeting Date: roject Title:
Paper Presentation Poster Presentation
Please attach a copy of your project abstract to the application.
as your project been accepted? Yes No
Attach documentation regarding acceptance if received at point of application.
Vill this be your first presentation at an ACS national or regional meeting? Yes No
no please list conferences at which you have presented:

Purpose of grant:
Other funding sources (if any):
Personal Statement of anticipated benefits of meeting attendance:
Has the applicant received a travel grant from the ACS Pittsburgh Section in the past? Yes No
If your application was selected, the Pittsburgh Section of the ACS would like you to write a short (one page) description of your activity upon completion of the conference for publication in our monthly newsletter, The Crucible, and on our website. The description is due within 30 days of the meeting attended. Photos are welcomed and encouraged.
I am willing to complete this report: Yes No
Signature:
Date:
Send completed hard-copy applications and supporting documentation to:
Pittsburgh Section ACS Travel Grants
Heather Juzwa, 321 Winners Circle, Canonsburg, PA 15317

Electronic copies of completed applications should be sent to <a href="https://hitzburgh.com">hljuzwa@shimadzu.com</a> and <a href="https://hitzburgh.com">heather sapko@hotmail.com</a>. Be sure to place "Pittsburgh Section ACS Travel Grants" in the subject line.



#### The Crucible

The Crucible is published monthly, August through May. All statements and opinions expressed herein are those of the editors or contributors and do not necessarily reflect the position of the Pittsburgh Section.

Editors: Alysia Mandato and Niharika Botcha, <a href="mailto:crucible@pittsburghacs.org">crucible@pittsburghacs.org</a>

## 2023 Pittsburgh Section Officers

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Secretary Samuel Leung

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**Treasurer** Matt Price

price@pennwest.edu

Treasurer- Niharika Botcha

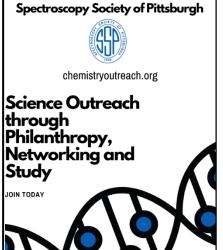
Elect <u>nbotcha@andrew.cmu.edu</u>

**Directors** David Waldeck

Heather Juzwa Evonne Baldauff Logan Miller Toby Chapman Ronghong Lin

Councilors Kim Woznack

Rich Danchik Haitao Liu Kristin Nuzzio



Network with local professionals

at our monthly meetings.



## **Advertise in The Crucible**

	1X	3X	6X	10X
Full Page	\$120	\$115	\$100	\$75
Half Page	\$75	\$70	\$60	\$45
3.5" x 2"	\$50	\$45	\$25	\$20

## Volunteer with Us!

We are always looking for new people to join the Pittsburgh Section Executive Committee. Email our Chair to inquire about opportunities.

## The Crucible Deadline

The deadline for items submitted to The Crucible is the 25<sup>th</sup> of the month prior to publication. For example, all items for the February 2023 issue must be to the editor by January 25<sup>th</sup>, 2023.

## **ACS Regional Awards – Apply Today!**

More information can be found here